

## CHAPTER 2

## PLANNING GUIDELINES

2-1. Design criteria and application. The two main documents submitted to the designer, prior to beginning design for a facility, are the Project Documents and this guide. The program lists the spaces and respective square footages for a specific project. This guide provides design criteria and application guidelines which will be used in the development of the project. Figure 2-1 illustrates how the Project Documents and the Design Guide are related. Use of these two documents will help the designer to quickly produce the schematic design and design development of the proposed facility.

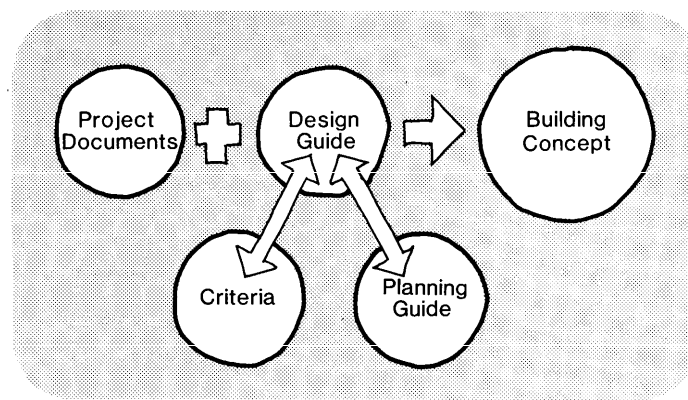


Figure 2-1. Project design development.

2-2. Site planning.

a. A facility must fit well into the surrounding environment, accommodating existing and future development. Selection of the most appropriate site is based on the following site characteristics:

(1) a relatively level site, suitable for the parking of military training vehicles.

(2) a high public visibility of the training center building.

(3) a buffered area of the site should be available to mask the noise and disruption caused by exterior training exercises and military equipment usage.

(4) an easily accessible site (Figure 2-2).

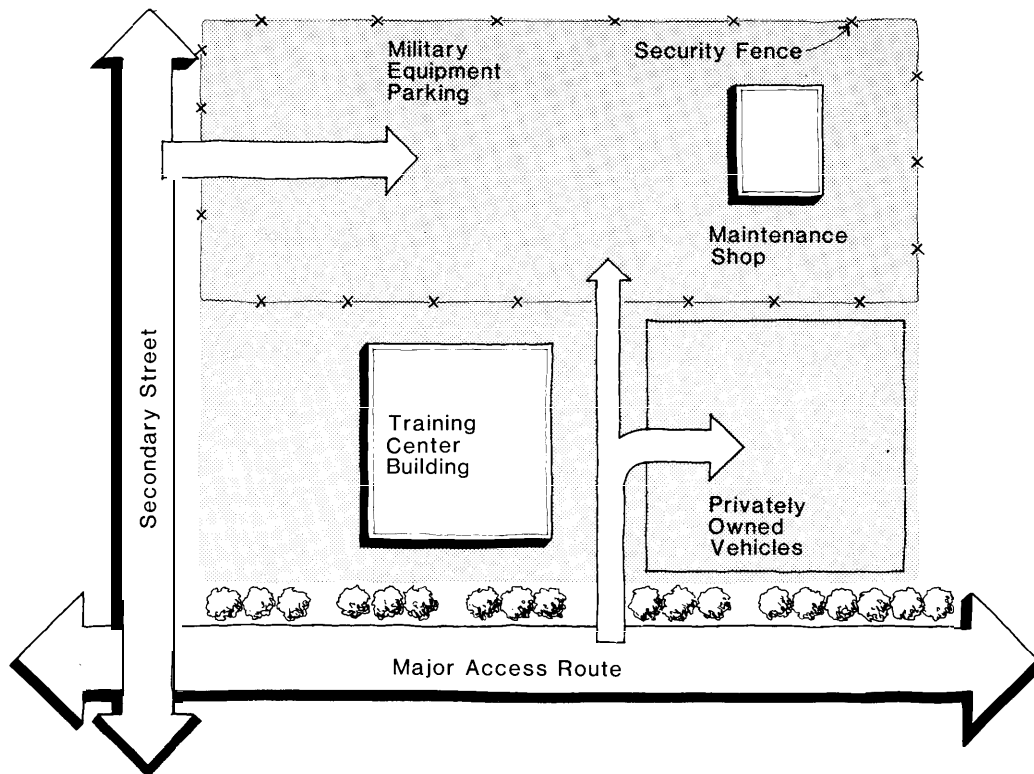


Figure 2-2. Site access.

b. The training center building, due to its high usage and the desire to provide high community visual presence, will be located on the most exposed side of the site (Figure 2-3). The POV parking area is best located behind or adjacent to the training center building. The OMS/AMSA is an individual structure located away from the training center building to minimize noise and disruption (Figure 2-4). Typical site layouts are shown in figures 2-2 through 2-5.

c. Painted striping will be provided in the POV and MEP areas, and planted islands should be avoided. Raised asphalt or concrete curbs should not be provided unless required for erosion control. Sidewalks will be planned from all building entrances to the POV and MEP areas; sidewalks in the parking areas should be avoided. Refer to AR 140-485 for parking lot design criteria.

d. Fencing is always provided for the MEP area. Fencing may be provided for the Training Center, by exception, for security considerations.

e. Provide an aluminum flagpole for each Reserve Center.

f. Refer to TM 5-803-5, chapter 3 for additional site planning considerations.

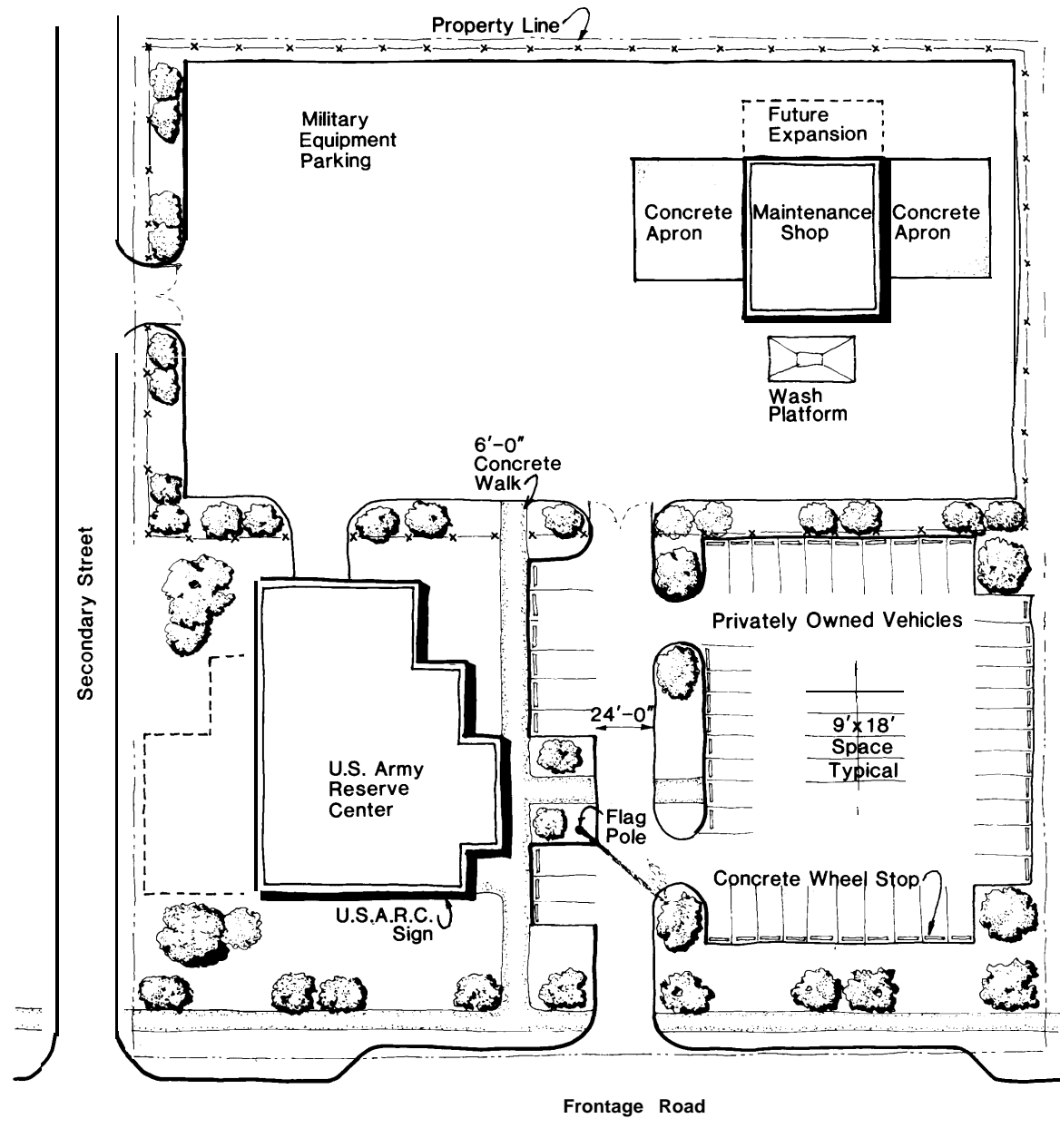


Figure 2-3. Typical site plan.

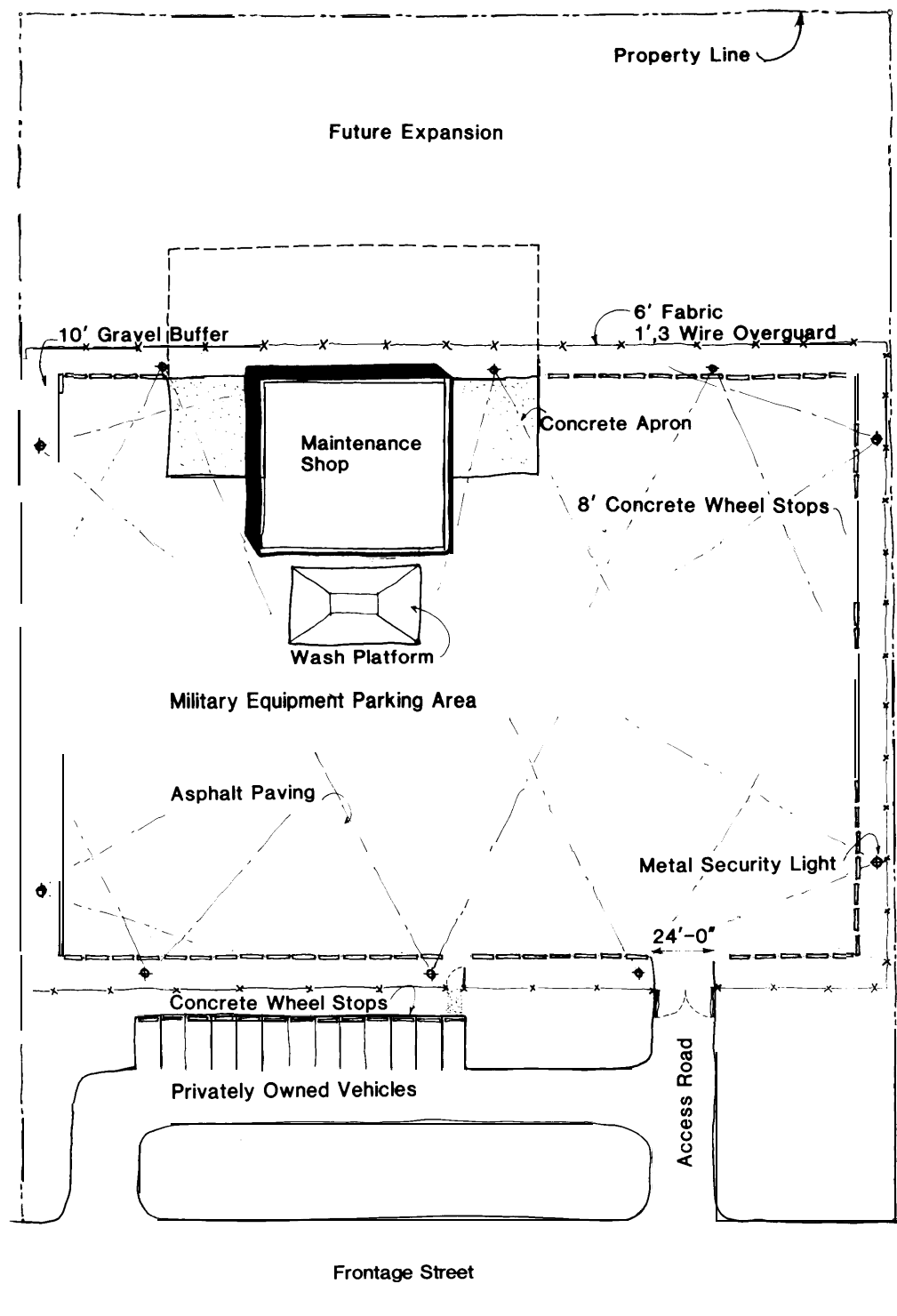


Figure 2-4. Area maintenance support activities (AMSA).

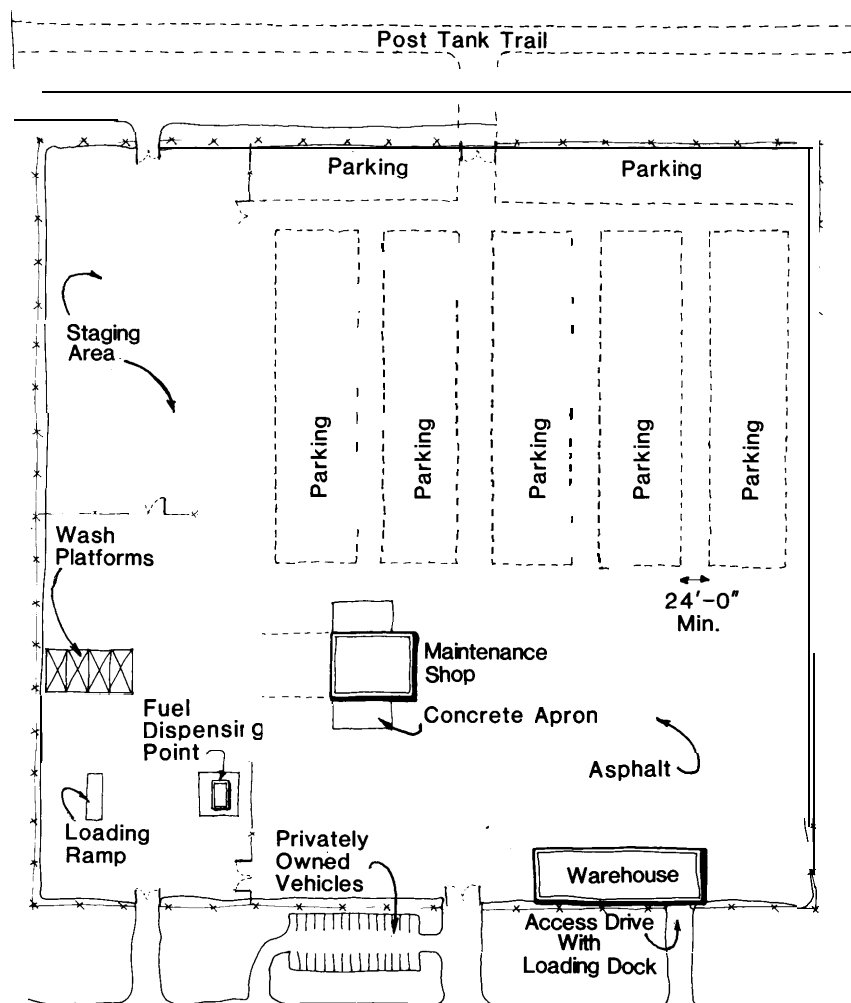


Figure 2-5. Equipment concentration site (ECS).

## 2-3. Landscape design.

a. Landscaping must be an integral part of the facilities design. Good landscape design affords many valuable benefits.

(1) Architectural character is supported by proper landscape design which introduces color, texture, form, etc., to the living environment.

(2) Traffic direction induced by design of planted areas can reduce the need for supplemental site graphics.

(3) Erosion control lessens adjacent environmental impact.

(4) Landscaping provides environmental buffers from harsh winds, intense solar conditions, and poor visual panoramas.

(5) Positive outdoor spaces are created by planned landscape design.

b. The plant and tree selection must be of a quality to afford permanent low maintenance vegetation appropriate for the facility's location. The vegetation must be able to be maintained with a minimum effort, be vandal resistant (or be of a nature which does not encourage vandalism) and be disease resistant and climatized to the area. The plant materials should also be appropriate for the proposed planting area. Consideration should be given to adjacent structures and improvements such that the landscaping does not adversely impact them (Figure 2-6). Trees should be carefully selected to prevent clogged gutters and drains during autumn and blocked sewer lines due to root damage. Refer to TM 5-803-5 for landscape design considerations.

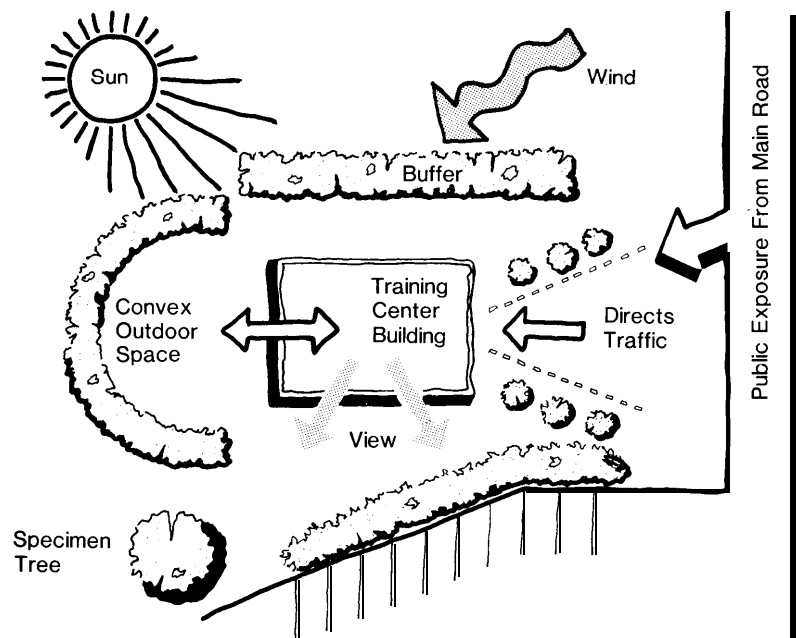


Figure 2-6. Landscaping.

#### 2-4. Architectural style and character.

a. The military facility, by its presence, represents national security, strength, austerity, efficiency, professionalism and pride in country and community.

b. The architecture must be sensitive to the style, scale and materials of the local region not only for aesthetics but also for function. Many local building forms and design statements are a direct outgrowth of a region's environmental and cultural characteristics. Trendy designs will be avoided.

c. The facility's style should blend into the existing architecture of the surroundings. The character should evoke a sense of pride in the nearby neighbors as well as the entire community.

d. Materials will be selected that are aesthetically pleasing and cost effective.

#### 2-5. Interior design.

a. The interior environment must respond to the needs of the facility as well as the individuals who occupy it and will be functional, aesthetically pleasing and cost effective. In addition, the interior environment should provide a humane setting which promotes a sense of belonging and well-being for the personnel. The following sections provide criteria that will be considered to meet these goals.

b. The interior environment will be developed in coordination with the architectural design. All features of the building, including moveable furnishings and equipment (whether or not a part of the construction contract), will be coordinated as parts of the overall design concept.

c. Through the planning process, the nature and configuration of the space can be examined. The adjacency requirements between the functional elements of an organization, adjacency priorities, work flow and patterns of communication will be initial considerations in the design process. Other factors will include multiple use of space and flexibility for future uses and growth. Overall, the primary goal of space planning is to convert functional program requirements into a workable, aesthetically pleasing environment.

d. Materials and finishes may be selected for external appearance alone, but they will ultimately affect the acoustical, lighting, insulating, fire-rating and maintenance factors of an environment. Any selection must satisfy aesthetic and functional requirements regarding durability, wearability and maintenance. To a great extent, materials and finishes have been predetermined for a facility. A summary of scheduled items can be found in chapter 3. Where selection options have been authorized, the above criteria shall be considered.

e. Emotional responses are, to a great extent, the product of color and its character and quality as encountered within the environment. These responses are influenced by the viewing conditions, the use of color on surrounding

objects and surfaces, and the size and relationships of these factors. Color can stimulate the imagination and create, attract, and maintain interest. Handled knowledgeably, imaginatively, and wisely, it is one of the most economical, yet psychologically satisfying and successful elements of the interior environment.

f. Specification of proper furnishings is critical to the performance and operational success of any facility. The standard criteria by which quality and appropriateness may be evaluated include function, moveability, adjustability, maintenance, durability, comfort, and cost. Procurement of furnishings is the responsibility of the assigned units. However, a layout will be prepared at the 10 percent design level to show circulation patterns and facilitate electrical and mechanical designs.

#### 2-6. Flexibility and economy of design.

a. Internal flexibility will be planned to absorb much of the growth and change of the facility over the years as units change their training emphasis. For example, a facility may be oriented to infantry training and then, after a period of time, may be changed to a medical unit. This may require additional maintenance/shop space and a decrease in the unit storage area. If a facility is designed with internal flexibility of building systems, it can accommodate change without undue expense. Therefore, the office design should not be too closely tailored to the units currently assigned but should be a generic office design providing a balanced ratio of exclusive office space to common office space (Figure 2-7).

b. External flexibility will also be planned to accommodate the growth of a facility. This requires proper siting and utility planning and a building systems approach to design, universally applied to the facility.

c. Economy of design will be taken in its broadest sense: initial cost, maintenance and building system flexibility. Consider the following flexible building systems:

(1) Architectural: Floor to ceiling remountable partition construction, ceiling system continuity to allow future partition flexibility, modular carpet, etc.

(2) Structural: Steel or concrete post and beam or pan/joist construction for greater interior space planning flexibility.

(3) Mechanical: Universally flexible systems such as variable air volume, expandable systems, use of multiple systems, etc.

(4) Electrical: Flat conductor cable for electrical and telephone distribution, flexible lighting and electrical systems compatible with flexible ceiling grids.



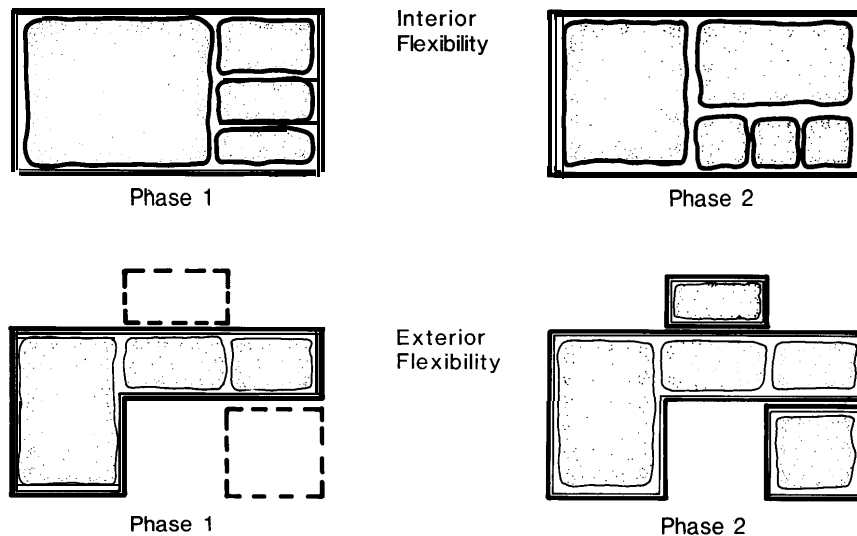


Figure 2-7. Flexibility.

#### 2-7. New construction, alterations and additions.

a. The criteria and requirements contained within the guide pertain to all three types of projects: new construction, alterations and additions. All three must conform to the requirements here and in DOD 4270.1-M. It is recognized, however, that due to the architectural configuration of the existing facilities and the remaining life of its systems and other considerations, it may not be feasible in alteration projects to meet all new construction standards. Professional judgment is required to design a building which combines old and new portions into a harmonious finished design to provide a complete and useable facility at the lowest life cycle cost. As soon as possible after design initiation, a detailed facility investigation will establish the limits of construction. These limits will be stated in narrative form along with a checklist of required repairs/demolition to be included with the preconcept (10 percent) submission. Investigations will include the following:

(1) Review required real property maintenance and repair work. Consult the facility manager and the support installation (BMAR) list.

(2) Verify accuracy of as-built drawings.

(3) Determine adequacy of supporting utilities.

(4) Determine the status of the following building components: structural, fire protection, electrical, plumbing, and HVAC systems; windows; roof; exterior and interior walls; doors and hardware; stairways; insulation.

b. Radiation protection requirements: There is no requirement to analyze existing facilities for fallout shelters since they have been surveyed by the Federal Emergency Management Agency. If a new addition is being provided, it must be determined if the addition will provide significant increased protection. If this is the case, the additional shelter space meeting protection factor (PF) 40 and above will be identified. No additional construction cost will be authorized to meet this criteria.

c. Economic studies - exceptions. A life cycle cost (LCC) based, economic study responsive only to the general requirements of DOD 4270.1-M. is not required in the following situations:

(1) When it can be shown that the study itself is not likely to prove to be cost effective.

(2) When the relative economic ranking of the various alternatives under consideration has already been established for similar design situations.

(3) When the total projected cost of the study for any particular design feature, if added to the cost of the economic studies already conducted or planned for other design features, would exceed one percent of the programmed amount (PA) for the project. For example, the total cost of economic studies for a project having a one million dollar PA could not exceed \$10,000.